



US00D745516S

(12) **United States Design Patent**
Yamazaki et al.

(10) **Patent No.:** **US D745,516 S**

(45) **Date of Patent:** **** Dec. 15, 2015**

(54) **PORTABLE INFORMATION TERMINAL**

(71) Applicant: **SEMICONDUCTOR ENERGY LABORATORY CO., LTD.**, Atsugi-shi, Kanagawa-ken (JP)

(72) Inventors: **Shunpei Yamazaki**, Tokyo (JP);
Hideaki Kuwabara, Isehara (JP);
Kensuke Yoshizumi, Kanagawa (JP)

(73) Assignee: **Semiconductor Energy Laboratory Co., LTD.**, Kanagawa-ken (JP)

(**) Term: **14 Years**

(21) Appl. No.: **29/478,760**

(22) Filed: **Jan. 8, 2014**

(30) **Foreign Application Priority Data**

Jul. 12, 2013 (JP) 2013-016004

(51) **LOC (10) Cl.** **14-02**

(52) **U.S. Cl.**
USPC **D14/345**; D14/341

(58) **Field of Classification Search**
USPC D14/315–318, 341–344, 129, 130, 496, D14/137, 138 R, 138 AA, 138 C, 138 G, D14/138 AB, 147, 203.1, 203.3, 203.4, D14/203.7, 247, 389; D6/300–302, 308, D6/310, 312, 332; D18/6, 7; D21/324, D21/329, 330, 332, 478–480, 484, 491, 492, D21/500–502; 455/556.2, 566; 379/916, 379/433.04, 433.1; 345/901, 905, 173; 361/679.26, 679.3, 679.55, 679.56; D25/48.4, 58; 297/17, 16.1, 45; D20/10, 21; 52/234; 160/118
CPC ... G06F 1/1616; G06F 1/1652; G06F 1/1647; G06F 1/1618; G06F 1/1641; H04M 1/0216; H04M 1/0268; H04M 1/0214; H04M 1/0247; A47G 1/065; A47G 5/00; A47G 1/04; G09G 2300/023

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

715,376 A * 12/1902 Harper 40/733
3,292,285 A * 12/1966 Kitayama 40/701

(Continued)

OTHER PUBLICATIONS

Bendable OLED panel (GEEK), available Jun. 6, 2014, [online], [site visited May 7, 2015]. Available from internet, <URL: <http://www.geek.com/mobile/bendable-oled-display-can-withstand-100000-folds-1596020/>>.*

(Continued)

Primary Examiner — Cathron Brooks

Assistant Examiner — Teddy Falloway

(74) *Attorney, Agent, or Firm* — Nixon Peabody LLP; Jeffrey L. Costellia

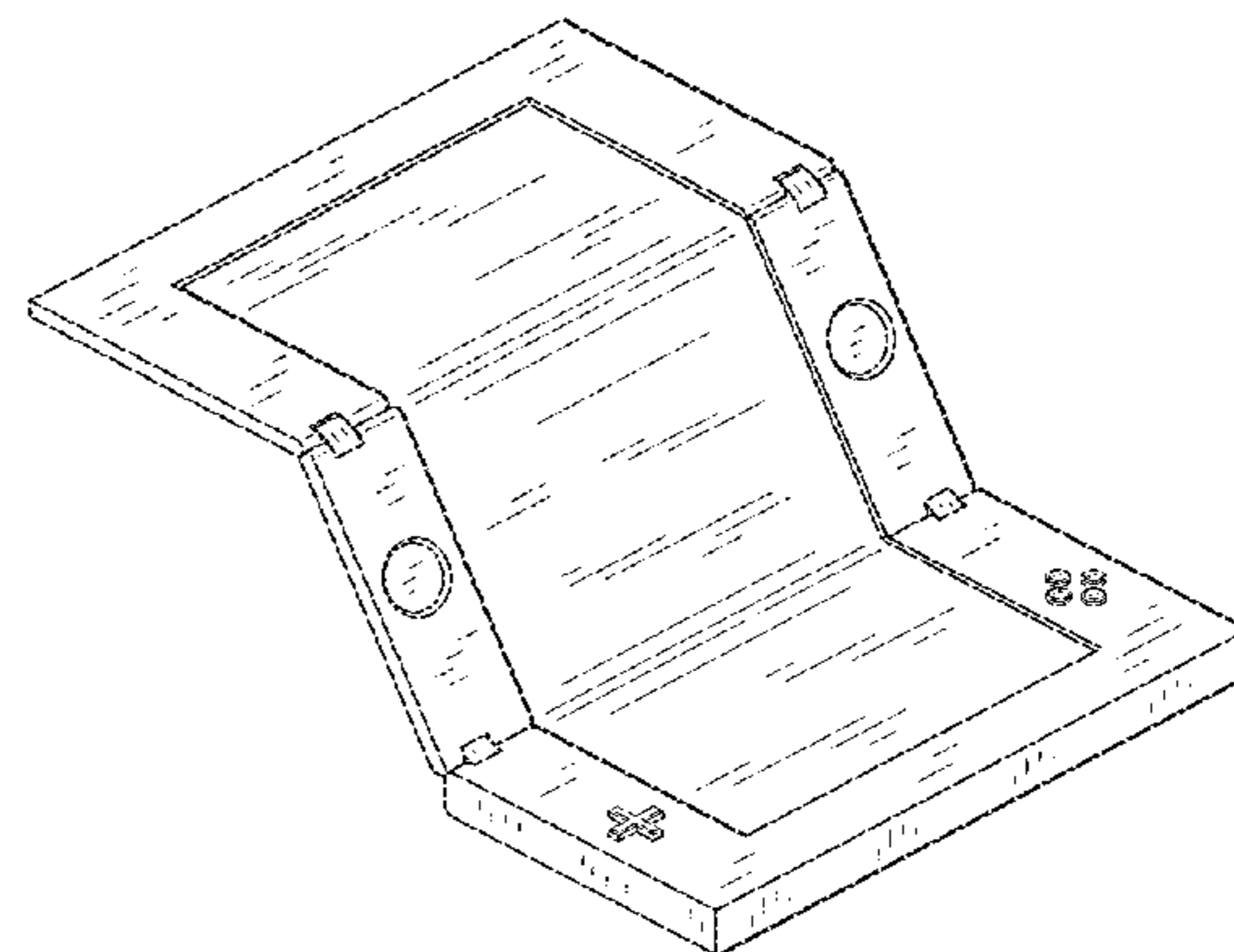
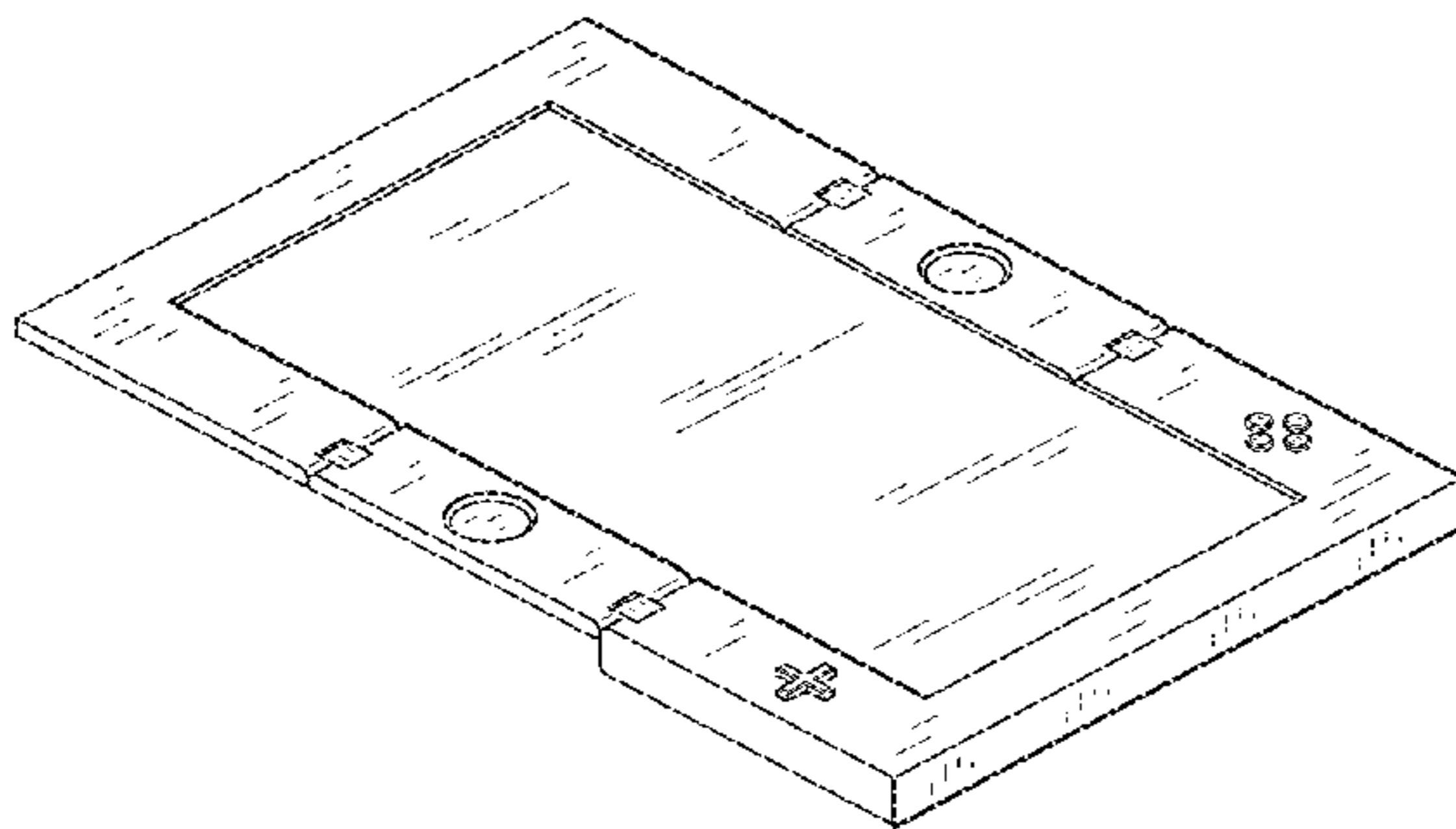
(57) **CLAIM**

We claim, the ornamental design for a portable information terminal, as shown and described.

DESCRIPTION

FIG. 1 is a front view of a portable information terminal showing our new design;
FIG. 2 is a rear view thereof;
FIG. 3 is a right side view thereof;
FIG. 4 is a left side view thereof;
FIG. 5 is a top view thereof;
FIG. 6 is a bottom view thereof;
FIG. 7 is a bottom right side perspective view thereof;
FIG. 8 is a bottom right side perspective view thereof in a state in which the portable information terminal is partly bent;
FIG. 9 is a bottom right side perspective view thereof in a state in which the portable information terminal is folded;
FIG. 10 is a top left side perspective view thereof in a state in which the portable information terminal is folded; and,
FIG. 11 is a bottom right side perspective view thereof in a state in which the portable information terminal is partly bent.
The portable information terminal includes a flexible display screen that can be used while in a bent state. The portable information terminal can function as a computer, a media reproducing device (e.g., a music player, a movie player, or a game player), a media storage device, a communication device (e.g., a mobile phone), or the like, for example.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

- 4,106,544 A * 8/1978 Dixon et al. 160/199
D357,707 S * 4/1995 Moore D20/10
D370,129 S * 5/1996 Freudenfeld D6/301
5,626,926 A * 5/1997 Roberts 428/14
D406,468 S * 3/1999 Byers D6/312
5,887,373 A * 3/1999 Byers 40/733
D415,619 S * 10/1999 Gandy D6/301
D424,971 S * 5/2000 Churchville D11/132
D426,391 S * 6/2000 Rowan D6/332
6,353,529 B1 * 3/2002 Cies 361/679.05
6,421,942 B1 * 7/2002 Galello 40/738
D477,634 S * 7/2003 Malone D19/26
6,637,139 B1 * 10/2003 Chan 40/725
D483,575 S * 12/2003 Chan D6/310
D514,826 S * 2/2006 Sakaguchi D6/312
D543,707 S * 6/2007 Chan D6/312
D544,922 S * 6/2007 Shaffer D20/10
D552,851 S * 10/2007 Abrahamian et al. D6/301
D572,024 S * 7/2008 Shapiro D6/301
7,469,961 B2 * 12/2008 Liu 297/16.1
D590,365 S * 4/2009 Kim et al. D14/138 AB
7,522,944 B2 * 4/2009 Hyun et al. 455/575.1
D594,028 S * 6/2009 Fuchsberg et al. D14/496
7,920,320 B2 * 4/2011 Watson et al. 359/296
8,005,522 B2 * 8/2011 Ou 455/575.3
D653,226 S * 1/2012 Nara D14/138 AB
8,393,749 B1 * 3/2013 Daicos 362/142
D694,754 S * 12/2013 Nakada D14/373
8,605,421 B2 * 12/2013 Verschoor et al. 361/679.3
8,971,031 B2 * 3/2015 Mok et al. 361/679.27
9,013,864 B2 * 4/2015 Griffin et al. 361/679.21
2003/0217817 A1 * 11/2003 Niehausmeier 160/118
2004/0212602 A1 * 10/2004 Nako et al. 345/173
2006/0146488 A1 * 7/2006 Kimmel 361/681
2010/0064564 A1 * 3/2010 Bemelmans et al. 40/607.01
2010/0157518 A1 * 6/2010 Ladouceur et al. 361/679.09
2010/0201604 A1 * 8/2010 Kee et al. 345/1.3
2011/0241998 A1 * 10/2011 McKinney et al. 345/168
2011/0242026 A1 * 10/2011 Ishigaki 345/173
2012/0001858 A1 * 1/2012 Matsuda et al. 345/173
2012/0002360 A1 * 1/2012 Seo et al. 361/679.01
2012/0044620 A1 * 2/2012 Song et al. 361/679.01
2012/0206896 A1 * 8/2012 Suzuki et al. 361/807
2012/0264489 A1 * 10/2012 Choi et al. 455/566
2013/0053100 A1 * 2/2013 Song et al. 455/556.1
2013/0307805 A1 * 11/2013 Arai 345/173
2013/0307816 A1 * 11/2013 Lee et al. 345/174
2013/0342090 A1 * 12/2013 Ahn et al. 312/258
2014/0003006 A1 * 1/2014 Ahn 361/749
2014/0054935 A1 * 2/2014 Loney 297/16.1
2014/0111954 A1 * 4/2014 Lee et al. 361/749
2014/0213324 A1 * 7/2014 Tan et al. 455/566
2014/0218321 A1 * 8/2014 Lee et al. 345/173
2014/0240264 A1 * 8/2014 Im et al. 345/173
2014/0319550 A1 * 10/2014 Yamazaki et al. 257/88
2014/0347806 A1 * 11/2014 Totani 361/679.27
2015/0055287 A1 * 2/2015 Seo 361/679.27
2015/0062028 A1 * 3/2015 Go et al. 345/173
2015/0062927 A1 * 3/2015 Hirakata et al. 362/362
2015/0116917 A1 * 4/2015 Aono 361/679.04

OTHER PUBLICATIONS

- OLED folding screen (OH GIZMO!), available Nov. 3, 2014, [online], [site visited May 7, 2015]. Available from internet, <URL: <http://www.ohgizmo.com/2014/11/03/prototype-oled-screen-can-fold-thirds/>>.*
Feno notebook (Yanko Design), available May 2, 2011, [online], [site visited May 13, 2015]. Available from internet, <URL: <http://www.yankodesign.com/2011/05/02/a-different-kind-of-fold/>>.*
Flexbook (designboom), available May 11, 2011, [online], [site visited May 13, 2015]. Available from internet, <URL: <http://www.designboom.com/design/flexbook-by-hao-chun-huang-fujitsu-design-award-2011-competition-shortlisted-entry/>>.*
Kyocera EOS (engadget), available Apr. 16, 2009, [online], [site visited May 13, 2015]. Available from internet, <URL: <http://www.engadget.com/2009/04/16/kyocera-shows-off-preposterous-beautiful-eos-folding-oled-phone/>>.*
iPhone flexible concepts (Concept Phones), available Apr. 30, 2012, [online], [site visited May 13, 2015]. Available from internet, <URL: <http://www.concept-phones.com/apple/seamless-flexible-display-iphone-concepts-ace-jockey/>>.*
Foldable Display (OH GIZMO!), available Jan. 8, 2009, [online], [site visited May 7, 2015]. Available from internet, <URL: <http://www.ohgizmo.com/2009/01/08/ces-2009-oled-association-shows-off-a-bunch-of-cool-toys-including-the-worlds-first-foldable-amoled-display/>>.*
Schott Flexible Glass, available Dec. 19, 2012, [online], [site visited May 13, 2015]. Available from internet, <URL: http://www.us.schott.com/advanced_optics/english/products/wafers-and-thin-glass/glass-wafer-and-substrates/ultra-thin-glass/index.html>.*
Hirakata et al., "Image Display Device", U.S. Appl. No. 29/478,750, filed Jan. 8, 2014, Specification and Drawings.
Yamazaki et al., "Portable Information Terminal", U.S. Appl. No. 29/478,747, filed Jan. 8, 2014, Specification and Drawings.
Yamazaki et al., "Portable Information Terminal", U.S. Appl. No. 29/478,786, filed Jan. 8, 2014, Specification and Drawings.
Yamazaki et al., "Portable Information Terminal", U.S. Appl. No. 29/478,765, filed Jan. 8, 2014, Specification and Drawings.

* cited by examiner

FIG. 1

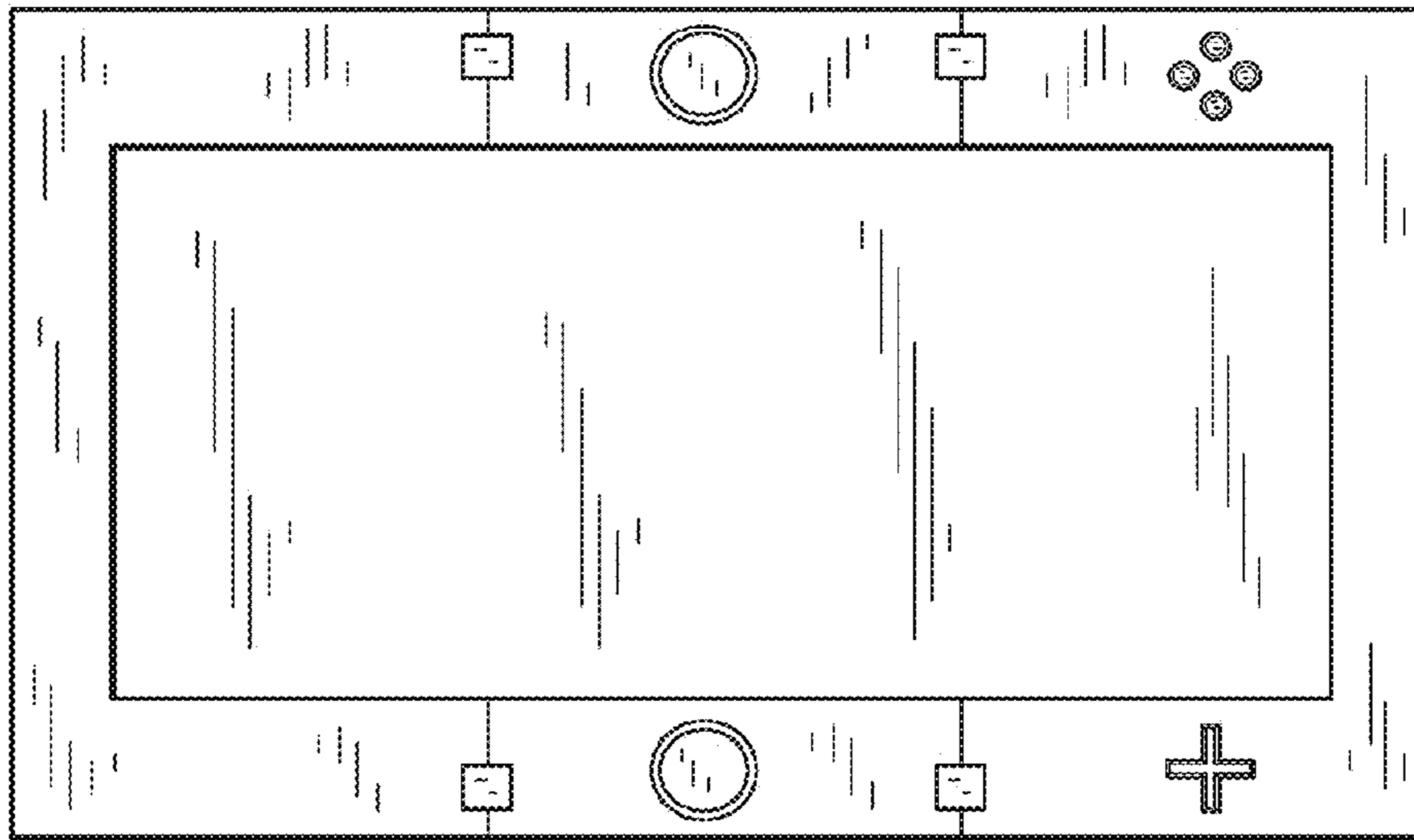


FIG. 2

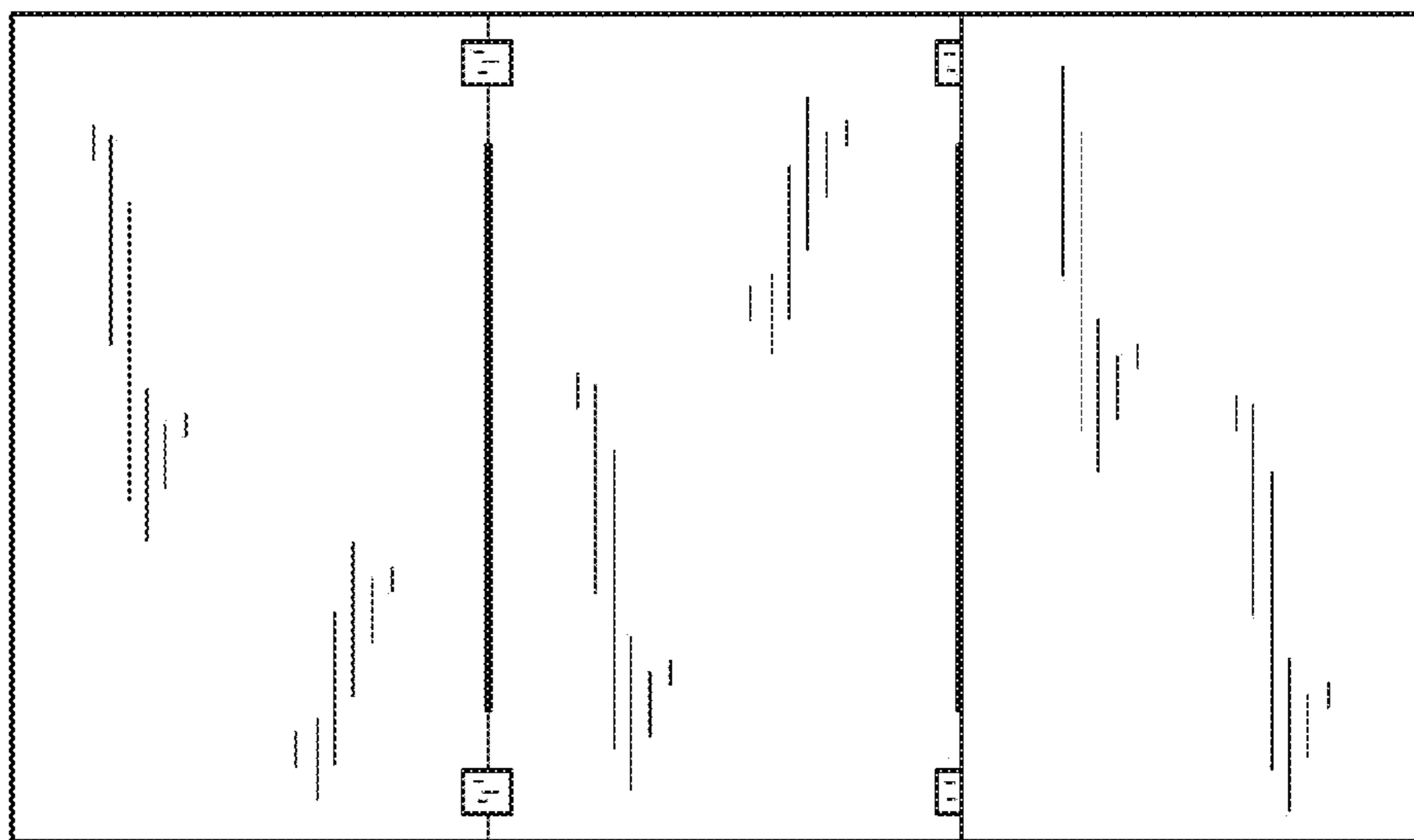


FIG. 3

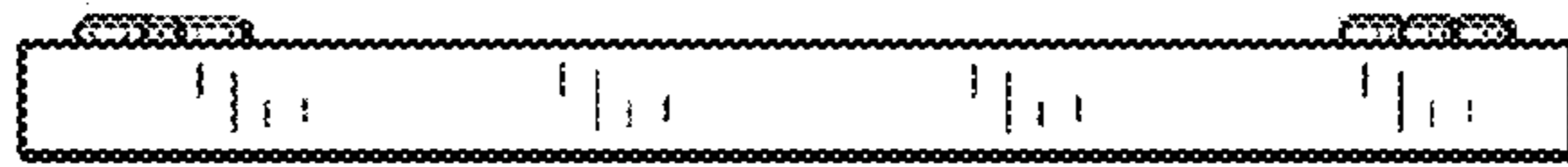


FIG. 4

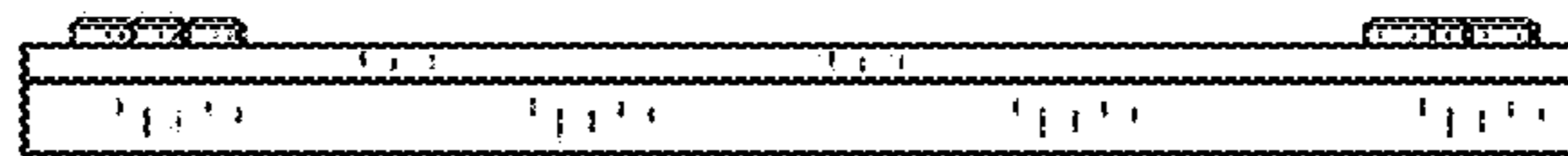


FIG. 5

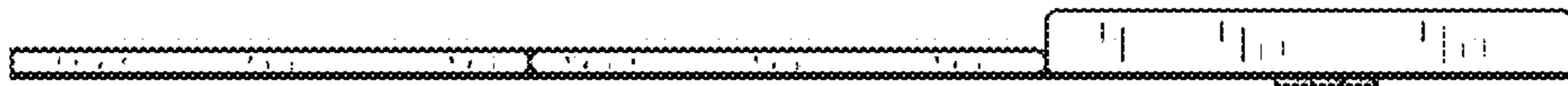


FIG. 6

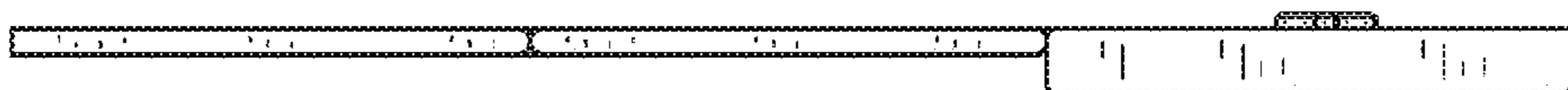


FIG. 7

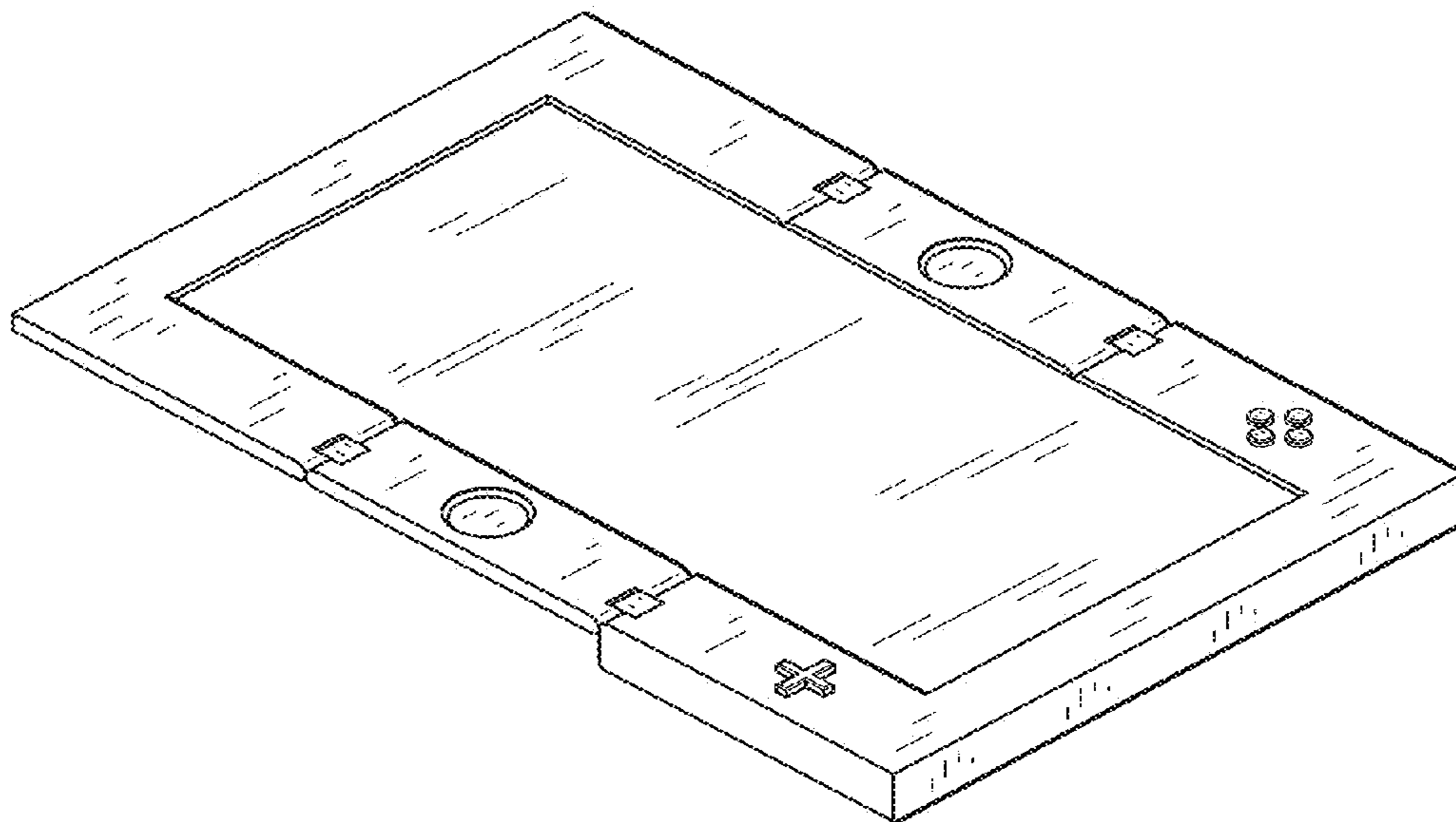


FIG. 8

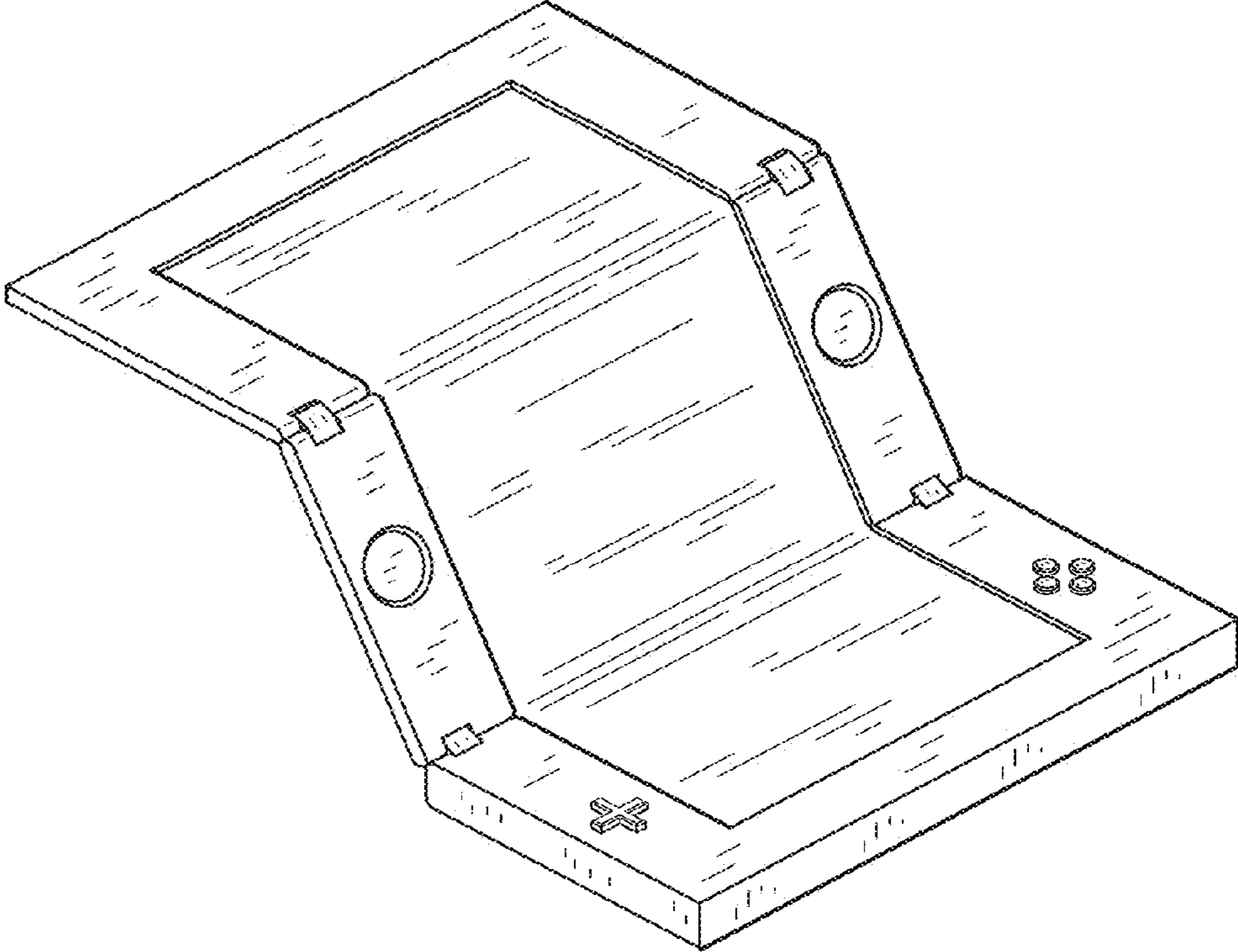


FIG. 9

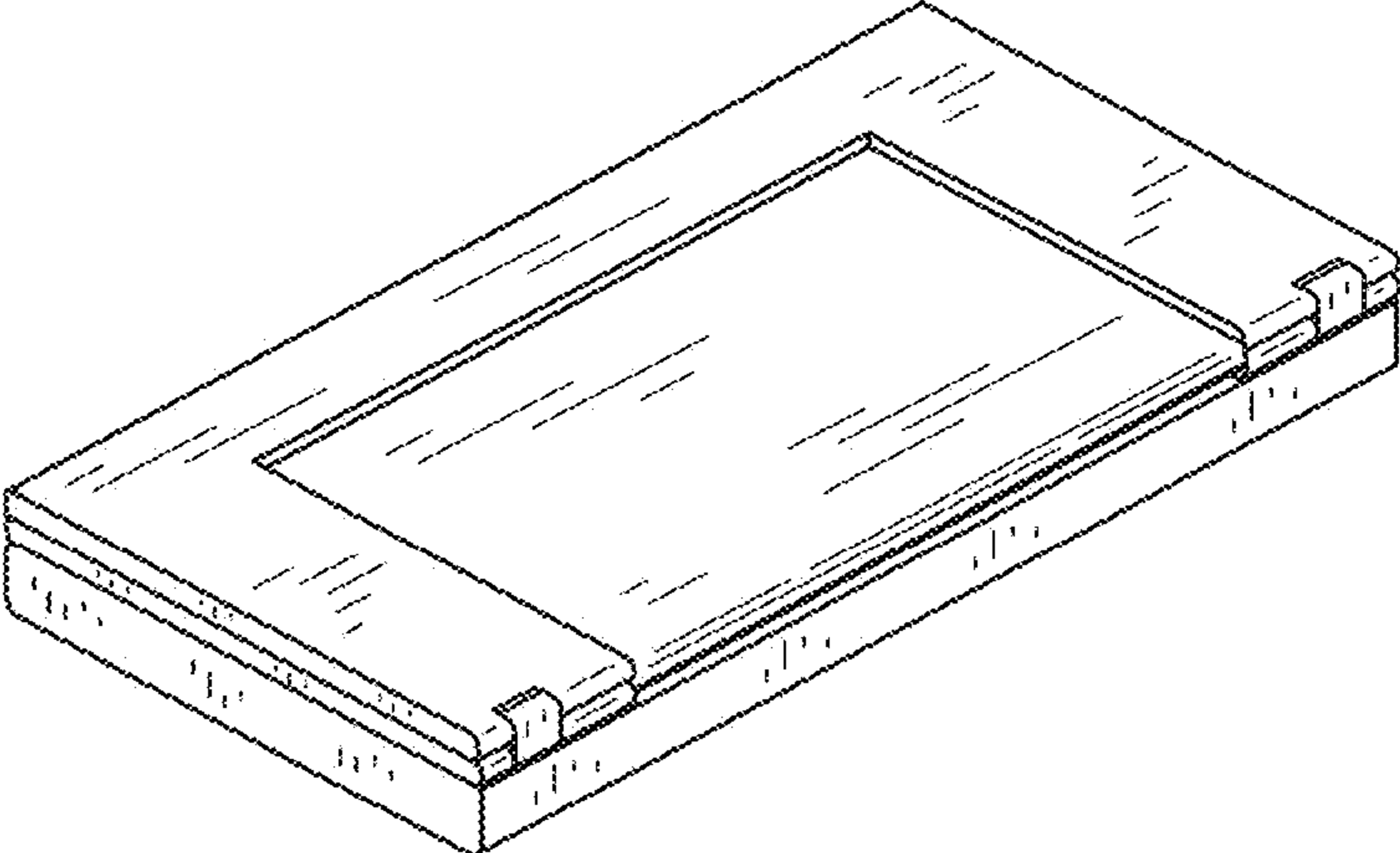


FIG. 10

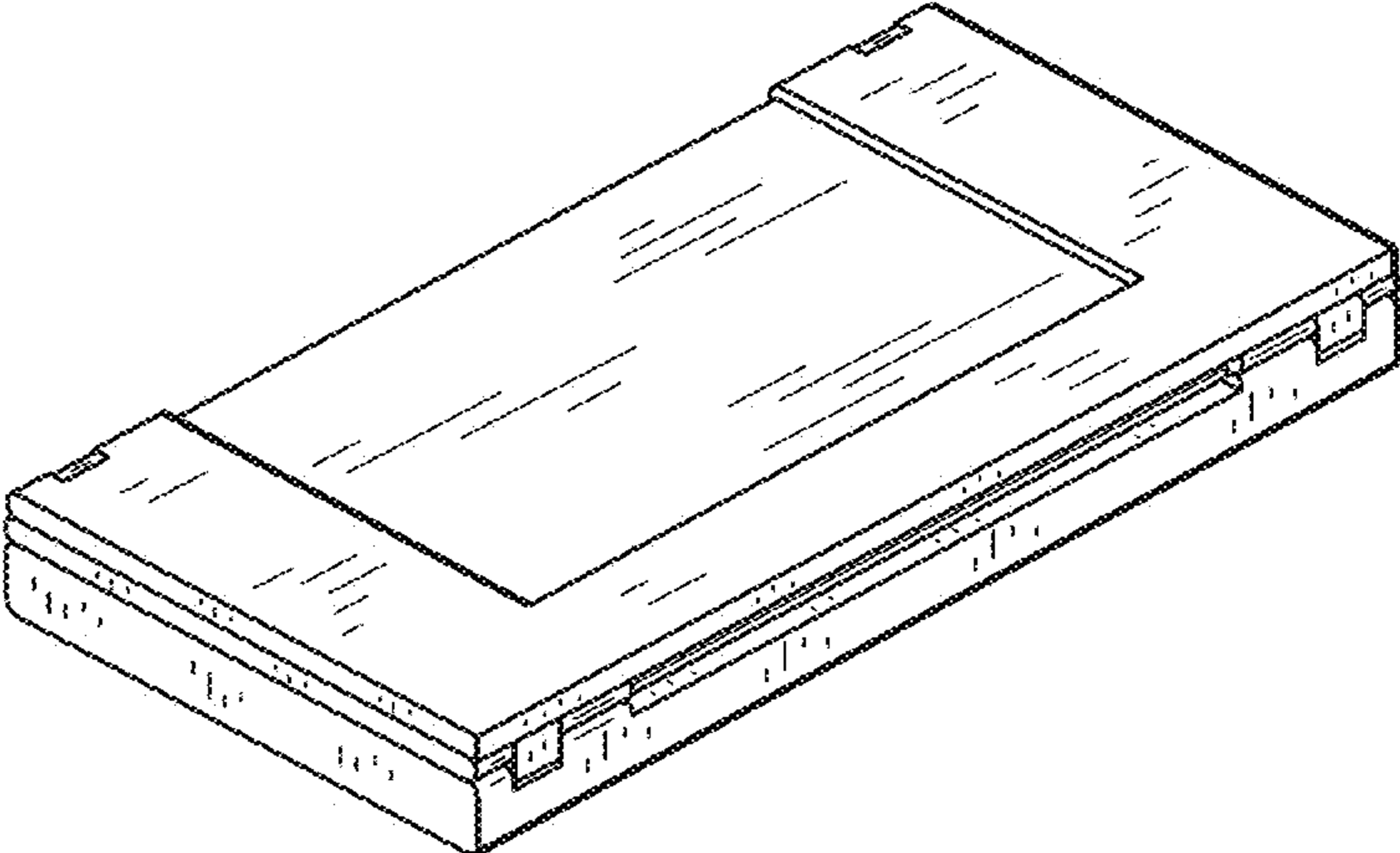


FIG. 11

